

Kelly Ranch
Habitat Conservation Area

Annual Report
October 2004 - September 2005

Prepared for:
U.S. Fish and Wildlife Service
California Department of Fish and Game
City of Carlsbad

Prepared by:



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I. Introduction

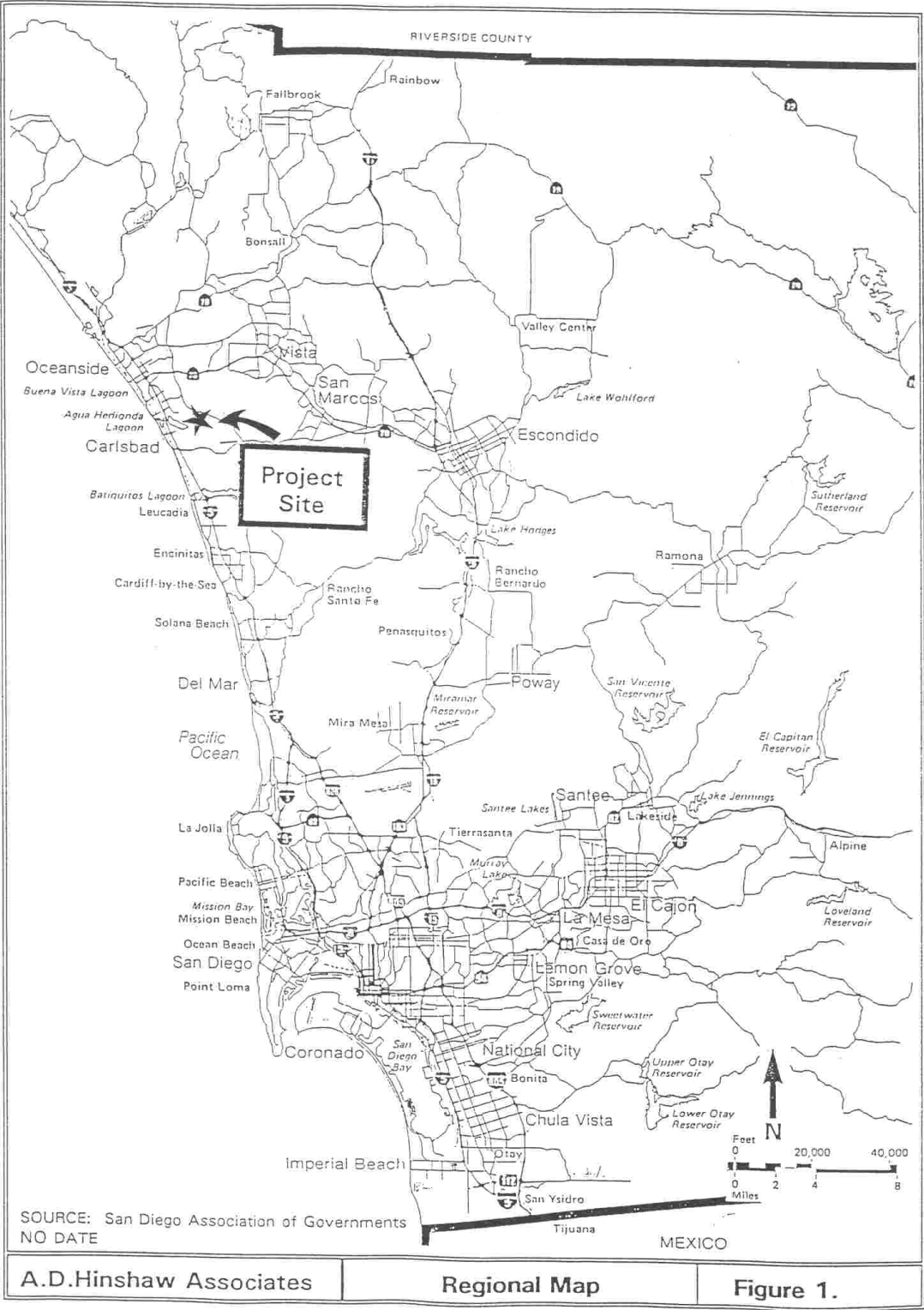
This report summarizes the management activities carried out on the Kelly Ranch Habitat Conservation Area by the preserve manager during the fiscal year of October 1, 2004 to September 31, 2005. The tasks and objectives discussed below are those derived from the *Kelly Ranch Habitat Conservation Area Management Plan*, prepared by the Center for Natural Lands Management (Center) in November of 2003.

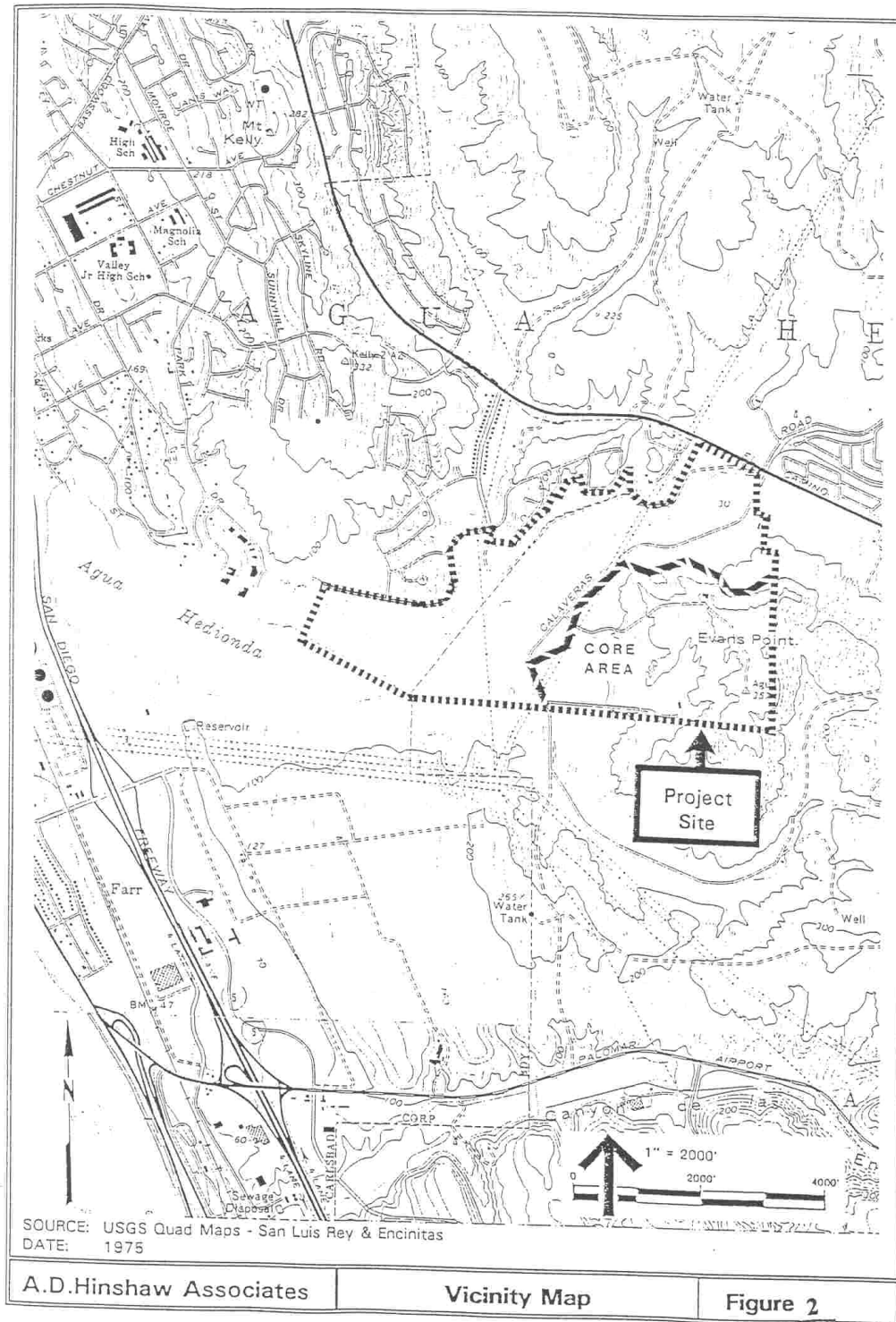
Kelly Ranch is located approximately 1 to 2 miles inland from the Pacific Ocean and lies at the east end of Agua Hedionda Lagoon (Figure 1 and 2). Roads near the Preserve include Cannon Road along the western boundary and Faraday Avenue near its southern boundary. The Preserve (63 acres) is not one unit, but is made of multiple parcels varying in size from a few acres to about 15 acres that are located within the housing development of Kelly Ranch and surrounding communities (Figure 3). Most of the area of the Preserve and adjacent land was formerly known as Evans Point. The site was set aside to protect its habitat, coastal sage scrub and southern maritime chaparral, and the threatened coastal California gnatcatcher (*Poliophtila californica californica*).

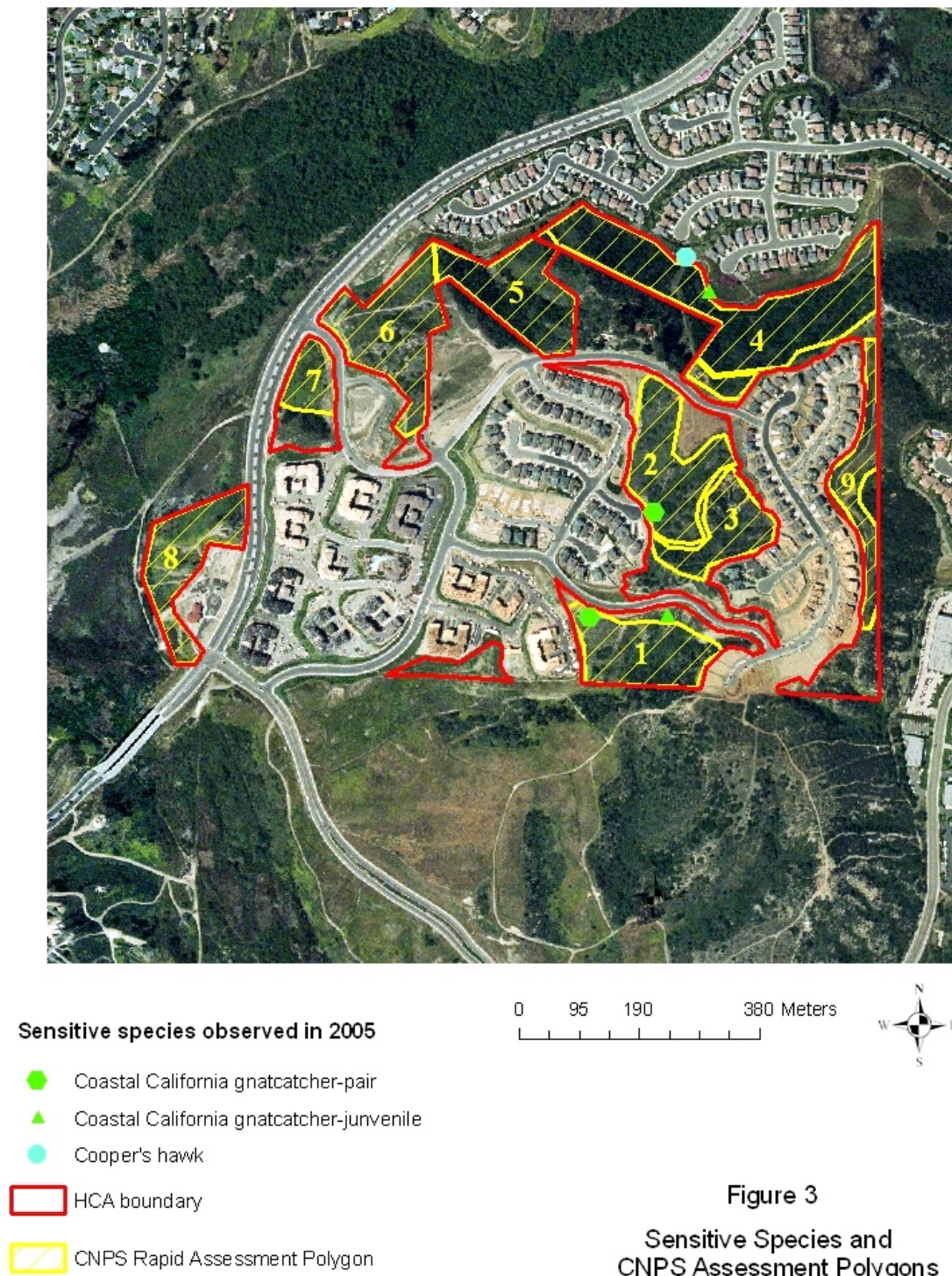
The Center for Natural Lands Management began managing Kelly Ranch Habitat Conservation Area in March of 2002. The Center has a conservation easement over the property and is fully endowed for long-term management. Management at the Preserve includes signing and maintaining fences (capital improvements), biological surveys, habitat restoration, public services and reporting. Each of these activities and their fiscal year results are summarized below and fully described within this report.

ACTIVITY SUMMARY

- Two pair of coastal California gnatcatchers were detected.
- Growth and status of the 100 Orcutt's hazardia that were planted near Cannon Road was monitored.
- Regular patrol, site enforcement and trash pickup was conducted to protect the Preserve.
- Vegetation communities were assessed using CNPS Rapid Assessment protocols.
- Non-native species were removed as necessary.
- Restoration was coordinated with CDF&G and Planning Systems, Inc.







II. Capital Improvements

The site has been well signed and no additional signing, gating or fencing was required or planned during the year.

III. Biological Surveys

Year 2003 was the first year of biological surveys carried out by the Center. Year 2004 built upon the 2003 surveys and laid groundwork for 2005 surveys. The *Management Plan* outlines the goals of biological monitoring at the Preserve. The general goal of the monitoring activities at Kelly Ranch is to 1) collect inventory data and 2) to assess the “health” of the vegetation community. Since the site is relatively small, steep and fragmented, little research can be done on the property.

Monitoring at this time includes plant surveys, bird community surveys and directed searches for coastal California gnatcatcher (CAGN, *Poliioptila californica californica*). Non-avian animal species are noted anecdotally during other types of surveys.

Table 1. 2005 Biological Surveys (Varanus Biological Services)

Date	Time	Weather	Survey Type
May 24, 2005	06:20 - 9:00	Overcast, calm, 65°F	Bird Community, CAGN
June 7, 2005	06:10 - 9:40	Clear, 0-3 mph wind, 60-67 °F	Bird Community, CAGN
June 20, 2005	06:20 - 08:50	Clear, calm, 58-63 °F	Bird Community, CAGN

* CAGN = Directed survey for coastal California gnatcatcher

Table 1 outlines survey dates, times, weather conditions and type of survey conducted. Focused CAGN surveys were conducted by Kylie Fisher at Varanus Monitoring Services who holds a separate USFWS permit authorizing her for such surveys. Results of surveys are provided in the following sections.

1. Reptiles and Amphibians. Reptiles and amphibians were noted anecdotally during surveys for other taxa. No focused surveys were conducted. Species detected during the year include western fence lizards (*Sceloporus occidentalis*), alligator lizard (*Elgaria multicarinata webbi*) and side-blotched lizard (*Uta stansburiana*).

2. Mammals. No focused mammal surveys were conducted during the year. Mammals observed during surveys include cottontail rabbit (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*) and racoon (tracks, *Procyon lotor*).

3. Birds. Avian monitoring was conducted during the months of April and May on three separate days (Table 1). Surveys include meandering through the property noting species observed and conducting focused USFWS protocol survey for CAGN.

Two pair of CAGN were observed during surveys, using the “middle” portion of the HCA (Figure 3). In prior years, they were observed near Cannon road. In addition, one pair was observed with several juveniles. A Cooper’s hawk (*Accipiter cooperii*) was also observed.

4. Plants and Vegetation Community. The Center updated the plant species list for the preserve in 2003. The survey noted and mapped sensitive species. A list of sensitive species observed and their abundances is provided in Table 2 and is scheduled for update in 2008. These species are mapped within the 2002-3 annual report. No focused plant surveys were conducted during this fiscal year.

Orcutt’s hazardia. The Center owns the only extant population of Orcutt’s hazardia (OH, *Hazardia orcuttii*) located within the Manchester Habitat Conservation Area. In the spring of 2003, the Center planted 25 individual *H. orcuttii* at Kelly Ranch, just off Cannon Road. In the spring of 2004, the Center planted 100 OH within the same area as 2003. Habitat and soils in this area is similar to Manchester as is its vicinity to the coast and coastal habitats. By the summer of 2005, 97 OH had survived. Measurements of 60 plants are being taken as part of the Center’s MOU concerning this planting effort (Figure 4). Data has been submitted to both the USFWS and CDFG. OH look very healthy and many were flowering at the time of the surveys.

Figure 4. Average Height of the 100 Orcutt’s hazardia planted in 2004.

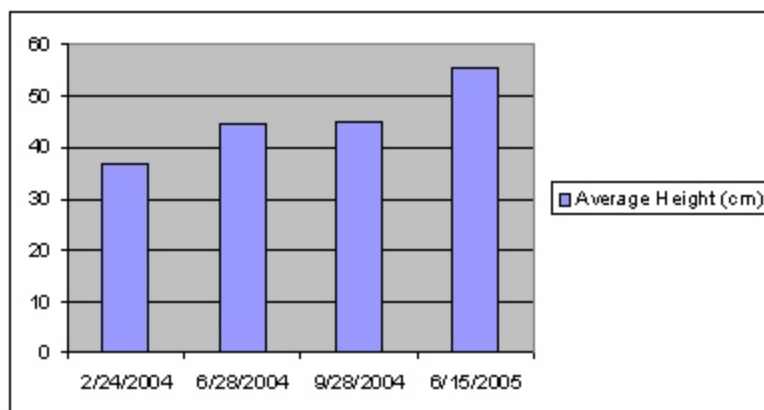


Table 2. Sensitive Plant List

Name and Sensitivity	1998 (Merkel & Associates)	2003	Notes
California adolphia (<i>Adolphia californica</i>) CNPS List 2	“Several hundred”	24	Next survey in 2008
Del Mar manzanita (<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>) FE, CNPS List 1B, MHCP.	29 (probably spp. <i>zacaensis</i>)	<50 located in dense habitat and difficult to count	Next survey in 2008
Wart-stemmed ceanothus (<i>Ceanothus verrucosus</i>) CNPS List 2, MHCP	“in the hundreds”	9	Next survey in 2008
Small-flowered microseris (<i>Microseris douglasii</i>) CNPS List 4	20	not found, probably impacted by development	
Prostrate spineflower (<i>Chorizanthe procumbens</i>) CNPS List 4	??? (“loss of majority of population” due to construction)	not found, probably impacted by development	
Western dichondra (<i>Dichondra occidentalis</i>) CNPS List 4	unknown	common	Next survey in 2008
Palmer’s grapplinghook (<i>Harpagonella palmeri</i>) CNPS List 2	???	Approximately 400	Next survey in 2008
Orcutt’s hazardia (<i>Hazardia orcuttii</i>) CT, MHCP	none	25 (transplanted from the Manchester Habitat Conservation Area)	Of 125 planted in 2003-4, 97 were found alive in 2005
Nuttall’s scrub oak (<i>Quercus dumosa</i>) MHCP, CNPS List 1B	??? (“lightly scattered”)	common	Next survey in 2008
Cliff spurge (<i>Euphorbia misera</i>) MHCP, CNPS List 2	“one thicket”	3	Next survey in 2008
Ashy-spike moss (<i>Selaginella cinerascens</i>) CNPS List 4	???	common	

* FE= Federally listed endangered; CT= California threatened; MHCP= Multiple Habitat Conservation Program Covered Species; CNPS= California Native Plant Society; ???= no initial count made during planning process.

The Center employed the CNPS Rapid Assessment protocol (February 5, 2003 forms) to characterize each vegetation community within the preserve. Although a more quantitative approach is preferred, the site's terrain is too steep or vegetation too dense in most areas to set up a permanent transect program. The Center assigned polygons to each parcel (or vegetation community within each parcel) and filled out the Assessment form according to the rules established by CNPS. Polygon location are shown in Figure 3 and results are provided in Appendix 1.

In general the vegetation communities on the property of our very high quality, except for the parcel located west of Cannon Road, which is being restored by Planning Systems as part of the Kelly Ranch Development requirements.

IV. Habitat Maintenance

Habitat restoration goals for the preserve include removing non-native plants from the preserve. For the most part the Preserve is in good condition and has little non-native plant cover. In 2005, we removed about 5 fennel (*Foeniculum vulgare*) clumps, and treated a few saltcedar (*Tamarisk spp*) resprouts in the detention basin on Cannon west of Hemmingway Avenue. Several pampas grass (*Cortaderia selloana*) clumps were treated along Hemmingway Avenue behind the development near Frost Avenue. Planning Systems has started its revegetation program that will end in about 4 years. This includes enhancing habitat west of Cannon Road and along manufactured slopes within the development.

V. Public Service

Public service activities have centered on patrolling the preserve in an attempt to control dumping and associated vandalism. In addition, public services include trash pick up and meeting with neighboring home owners who have questions or concerns in regards to the HCA.

At this time there are few problems at the preserve. At times there is sign of vagrants living in shacks near the southern boundary of the preserve, but we have cleared old shacks and all debris and have not observed any new shacks recently.

VI. Reporting

Encompassed within the heading of reporting are all data analysis, GIS and remote sensing, meetings and regional coordination, photo documentation activities and budget and financial status.

Data that has been entered into digital databases include bird count and plant list data. Data on preserve boundary and sensitive species locations have been entered into a GIS database. This report represents the third annual report for this preserve. An annual work plan for the next fiscal year will be provided to the wildlife agencies in December of 2005.

Finally, the Preserve manager has maintained all necessary agency permits to allow the continued monitoring of the Preserve's biota.

Budget/Financials: The total expenditures for 2004-5 were \$13,130 of a planned budget of \$13,342. The total funds available (September 30, 2005), including endowment and temporarily restricted funds, are \$367,250.

VII. Summary and Discussion

Management at Kelly Ranch continues to be successful at protecting the Preserve from human encroachment, building baseline biological data, and developing a better understanding of the Preserve and its regional context. Preserve Management in next year will continue in a similar fashion as this year. A detailed work plan for the next fiscal year has been developed for this purpose.

Appendices

Appendix 1. CNPS Rapid Assessment Forms

CALIFORNIA NATIVE PLANT SOCIETY - VEGETATION RAPID ASSESSMENT FIELD FORM

(Revised February 5, 2003)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association
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LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: 1 Air photo #: 1 Date: 7-15-05 Name(s) of surveyors: Markus Spiegelberg - CNLM

GPS waypoint #: _____ GPS name: _____ GPS datum: (NAD 27) _____ Is GPS within stand? Yes / No

If No cite distance (note ft/m), bearing and view from point to stand center: _____ Error: \pm _____ ft/m

UTM field reading: UTM E _____ UTM N _____ UTM zone: _____

Elevation: _____ ft/m Photograph #'s: _____

Topography: flat _____ concave _____ convex _____ undulating _____ | bottom ☒ lower ☒ mid ☒ upper ☒ top ☒

Geology: _____ Soil Texture: _____ % Large Rock _____ % Small Rock _____ % Bare/Fines _____

Slope exposure (circle one and/or enter actual $^{\circ}$): NE _____ SE _____ SW _____ NW ☒ Flat _____ Variable _____

Slope steepness (circle one and enter actual $^{\circ}$): 0° _____ $1-5^{\circ}$ _____ $5-25^{\circ}$ _____ $>25^{\circ}$ ☒ Upland ☐ or Wetland/Riparian (circle one)

Site history, stand age, and comments: Site managed by CNLM since 2002, stand probably 50+ yrs old, mature, high quality polygon within Kelly Ranch Habitat Conservation Area

Type / level of disturbance (use codes): L

VEGETATION DESCRIPTION

Field-assessed vegetation alliance name: Diegan Coastal Sage Scrub

Field-assessed association name (optional): _____

Size of stand: ☐ <1 acre ☐ 1-5 acres ☒ >5 acres Adjacent alliances: _____

Tree: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

If Tree, list 1-3 dominant overstory spp.: _____

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) Desert Palm/Joshua Tree: 1 (<1.5" base diameter), 2 (1.5-6" diam.), 3 (>6" diam.)

Desert Riparian Tree/Shrub: 1 (<2ft. stem ht.), 2 (2-10ft. ht.), 3 (10-20ft. ht.), 4 (>20ft. ht.)

% Overstory Conifer/Hardwood Tree cover: _____ / _____ Shrub cover: 85% Herbaceous cover: 50% Total Veg cover: 100%

Modal Conifer/Hardwood height: _____ / _____ Tall Shrub/Low Shrub height: 4m / 1m Herbaceous height: 0.5m

Species (List up to 12 major species), Stratum, and Approximate % cover: (Jepson Manual nomenclature please)

Strata categories: T=tall, M=medium, L=low; % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Strata	Species	% cover	Strata	Species	% cover
M	Artemisia californica	25-50			
T	Rhus integrifolia	25-50			
M	Salvia mellifera	15-25			
M	Encelia californica	15-25			
L	Nassella pulchra	5-15			
M	Eriogonum fasciculatum	5-15			

Major non-native species (with % cover): Tree tobacco <1%

Unusual species: _____

PROBLEMS WITH INTERPRETATION

Confidence in identification: (L, M, H) H Explain _____

Other identification problems (describe): _____

Polygon is more than one type: (Yes, No) _____ (Note: type with greatest coverage in polygon should be entered in above section)

Other types: _____

Has the vegetation changed since air photo taken? (Yes, No) _____ If Yes, how? What has changed (write N/A if so)? _____

CALIFORNIA NATIVE PLANT SOCIETY - VEGETATION RAPID ASSESSMENT FIELD FORM

(Revised February 5, 2003)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association		
LOCATIONAL/ENVIRONMENTAL DESCRIPTION					
Polygon/Stand #:	Air photo #:	Date:	Name(s) of surveyors:		
2	1	7-15-05	Markus Spiegelberg		
GPS waypoint #:		GPS name:	GPS datum: (NAD 27) Is GPS within stand? Yes / No		
If No cite distance (note ft/m), bearing and view from point to stand center:		Error: ± ft/m			
UTM field reading: UTME		UTMN	UTM zone:		
Elevation: ft/m Photograph #'s:					
Topography: flat concave convex undulating bottom X lower X mid X upper X top X					
Geology: Soil Texture: % Large Rock % Small Rock % Bare/Fines					
Slope exposure (circle one and/or enter actual °): NE SE SW NW X Flat Variable					
Slope steepness (circle one and enter actual °): 0° 1-5° 5-25° X > 25° (Upland) or Wetland/Riparian (circle one)					
Site history, stand age, and comments: Site managed by CNLM since 2002, stand probably 50 yrs mature, high quality polygon within Kelly Ranch Habitat Conservation Area					
Type / level of disturbance (use codes):					
VEGETATION DESCRIPTION					
Field-assessed vegetation alliance name: Desert Coastal Sage Scrub					
Field-assessed association name (optional):					
Size of stand: <1 acre 1-5 acres >5 acres X Adjacent alliances:					
Tree: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)					
If Tree, list 1-3 dominant overstory spp.:					
Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)					
Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) Desert Palm/Joshua Tree: 1 (<1.5" base diameter), 2 (1.5-6" diam.), 3 (>6" diam.)					
Desert Riparian Tree/Shrub: 1 (<2ft. stem ht.), 2 (2-10ft. ht.), 3 (10-20ft. ht.), 4 (>20ft. ht.)					
% Overstory Conifer/Hardwood Tree cover: / Shrub cover: 100 Herbaceous cover: 50% Total Veg cover: 100%					
Modal Conifer/Hardwood height: / Tall Shrub/Low Shrub height: 3m / 1m Herbaceous height:					
Species (List up to 12 major species), Stratum, and Approximate % cover: (Jepson Manual nomenclature please)					
Strata categories: T=tall, M=medium, L=low; % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%					
Strata	Species	% cover	Strata	Species	% cover
M	Artemisia californica	25-50			
T	Rhus integrifolia	25-50			
M	Salvia mellifera	15-25			
M	Encelia californica	15-25			
L	Nassella pulchra	1-5			
M	Eriogonum fasciculatum	5-15			
Major non-native species (with % cover): Tree tobacco < 1%					
Unusual species:					
PROBLEMS WITH INTERPRETATION					
Confidence in identification: (L, M, H) LH Explain					
Other identification problems (describe):					
Polygon is more than one type: (Yes, No) (Note: type with greatest coverage in polygon should be entered in above section)					
Other types:					
Has the vegetation changed since air photo taken? (Yes, No) If Yes, how? What has changed (write N/A if so)?					

CALIFORNIA NATIVE PLANT SOCIETY - VEGETATION RAPID ASSESSMENT FIELD FORM

(Revised February 5, 2003)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association
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LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: 3 Air photo #: 1 Date: 7-15-05 Name(s) of surveyor(s): Marcus Spiegelberg

GPS waypoint #: _____ GPS name: _____ GPS datum: (NAD 27) _____ Is GPS within stand? Yes / No

If No cite distance (note ft/m), bearing and view from point to stand center: _____ Error: ± _____ ft/m

UTM field reading: UTM E _____ UTM N _____ UTM zone: _____

Elevation: _____ ft/m Photograph #s: _____

Topography: flat _____ concave _____ convex _____ undulating _____ bottom _____ lower _____ mid _____ upper _____ top _____

Geology: _____ Soil Texture: _____ % Large Rock _____ % Small Rock _____ % Bare/Fines _____

Slope exposure (circle one and/or enter actual °): NE _____ SE _____ SW _____ NW X Flat _____ Variable _____

Slope steepness (circle one and enter actual °): 0° _____ 1-5° _____ 5-25° X > 25° Upland or Wetland/Riparian (circle one)

Site history, stand age, and comments: Ecotone mature high quality stand 50+ yrs old within CNLM's Kelly Ranch Habitat Conservation Area

Type / level of disturbance (use codes): _____

VEGETATION DESCRIPTION

Field-assessed vegetation alliance name: Southern maritime chaparral

Field-assessed association name (optional): _____

Size of stand: <1 acre _____ 1-5 acres X >5 acres _____ Adjacent alliances: _____

Tree: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

If Tree, list 1-3 dominant overstory spp.: _____

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) Desert Palm/Joshua Tree: 1 (<1.5" base diameter), 2 (1.5-6" diam.), 3 (>6" diam.)

Desert Riparian Tree/Shrub: 1 (<2ft. stem ht.), 2 (2-10ft. ht.), 3 (10-20ft. ht.), 4 (>20ft. ht.)

% Overstory Conifer/Hardwood Tree cover: _____ / _____ Shrub cover: 75% Herbaceous cover: _____ Total Veg cover: _____

Modal Conifer/Hardwood height: _____ / _____ Tall Shrub/Low Shrub height: 3 m / 1 m Herbaceous height: _____

Species (List up to 12 major species), Stratum, and Approximate % cover: (Jepson Manual nomenclature please)

Strata categories: T=tall, M=medium, L=low: % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Strata	Species	% cover	Strata	Species	% cover
M	<i>Adenostoma fasciculatum</i>	15-25	M	<i>Eriogonum fasciculatum</i>	5-15
M	<i>Arctostaphylos glandulosa</i> ssp. <i>gland.</i>	1-5	M	<i>Artemisia californica</i>	5-15
M	<i>Adelpha californica</i>	1-5	M	<i>Yucca schottigera</i>	1-5
M	<i>Rhus integrifolia</i>	15-25	M	<i>Quercus dumosa</i>	1-5
M	<i>Salvia mellifera</i>	5-15	M	<i>Xylococcus bicolor</i>	1-5
M	<i>Ceanothus dumosa</i>	1-5	M	<i>Heteromeles heteromeles</i>	1-5

Major non-native species (with % cover): Tree tobacco <1%, Eucalyptus 1 tree

Unusual species: _____

PROBLEMS WITH INTERPRETATION

Confidence in identification: (L, M, H) H Explain _____

Other identification problems (describe): _____

Polygon is more than one type: (Yes, No) _____ (Note: type with greatest coverage in polygon should be entered in above section)

Other types: _____

Has the vegetation changed since air photo taken? (Yes, No) No If Yes, how? What has changed (write N/A if so)? _____

CALIFORNIA NATIVE PLANT SOCIETY - VEGETATION RAPID ASSESSMENT FIELD FORM

(Revised February 5, 2003)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association:
LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #:	Air photo #:	Date:	Name(s) of surveyors:
4	1	7-15-05	Markus Spiegelberg
GPS waypoint #: _____ GPS name: _____ GPS datum: (NAD 27) _____ Is GPS within stand? Yes / No			
If No cite distance (note ft/m), bearing and view from point to stand center: _____ Error: ± _____ ft/m			
UTM field reading: UTM _____ UTMN _____ UTM zone: _____			
Elevation: _____ ft/m Photograph #'s: _____			
Topography: flat _____ concave _____ convex _____ undulating _____ bottom <input checked="" type="checkbox"/> lower <input checked="" type="checkbox"/> mid <input checked="" type="checkbox"/> upper <input checked="" type="checkbox"/> top <input checked="" type="checkbox"/>			
Geology: _____ Soil Texture: _____ % Large Rock _____ % Small Rock _____ % Bare/Fines _____			
Slope exposure (circle one and/or enter actual °): NE _____ SE _____ SW _____ NW <input checked="" type="checkbox"/> Flat _____ Variable _____			
Slope steepness (circle one and enter actual °): 0° _____ 1-5° _____ 5-25° _____ >25° <input checked="" type="checkbox"/> Upland or Wetland/Riparian (circle one)			
Site history, stand age, and comments: <u>steep slope of high quality habitat part of CNCM's Kelly Ranch Habitat Conservation Area</u>			
Type / level of disturbance (use codes): _____			
VEGETATION DESCRIPTION			
Field-assessed vegetation alliance name: <u>Oregon coastal sage scrub</u>			
Field-assessed association name (optional): _____			
Size of stand: <1 acre _____ 1-5 acres _____ >5 acres <input checked="" type="checkbox"/> Adjacent alliances: _____			
Tree: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)			
If Tree, list 1-3 dominant overstory spp.: _____			
Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)			
Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) Desert Palm/Joshua Tree: 1 (<1.5" base diameter), 2 (1.5-6" diam.), 3 (>6" diam.)			
Desert Riparian Tree/Shrub: 1 (<2ft. stem ht.), 2 (2-10ft. ht.), 3 (10-20ft. ht.), 4 (>20ft. ht.)			
% Overstory Conifer/Hardwood Tree cover: _____ / _____ Shrub cover: <u>100</u> Herbaceous cover: _____ Total Veg cover: <u>100</u>			
Modal Conifer/Hardwood height: _____ / _____ Tall Shrub/Low Shrub height: <u>5m</u> / <u>3m</u> Herbaceous height: _____			
Species (List up to 12 major species), Stratum, and Approximate % cover: (Jepson Manual nomenclature please)			
Strata categories: T=tall, M=medium, L=low: % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%			
Strata	Species	% cover	Strata
T	<i>Quercus integrifolia</i>	80	
M	<i>Artemisia californica</i>	10	
M	<i>Eriogonum fasciculatum</i>	15	
M	<i>Heteromeles heteromeles</i>	5-15	
Major non-native species (with % cover): _____			
Unusual species: _____			
PROBLEMS WITH INTERPRETATION			
Confidence in identification: (L, M, H) <u>HH</u> Explain _____			
Other identification problems (describe): _____			
Polygon is more than one type: (Yes/No) <u>No</u> (Note: type with greatest coverage in polygon should be entered in above section)			
Other types: _____			
Has the vegetation changed since air photo taken? (Yes/No) <u>No</u> If Yes, how? What has changed (write N/A if so)? _____			

CALIFORNIA NATIVE PLANT SOCIETY - VEGETATION RAPID ASSESSMENT FIELD FORM

(Revised February 5, 2003)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association
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LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: 5 Air photo #: 1 Date: _____ Name(s) of surveyors: _____

GPS waypoint #: _____ GPS name: _____ GPS datum: (NAD 27) _____ Is GPS within stand? Yes / No

If No cite distance (note ft/m), bearing and view from point to stand center: _____ Error: ± _____ ft/m

UTM field reading: UTM E _____ UTM N _____ UTM zone: _____

Elevation: _____ ft/m Photograph #'s: _____

Topography: flat _____ concave _____ convex _____ undulating _____ bottom _____ lower _____ mid _____ upper _____ top _____

Geology: _____ Soil Texture: _____ % Large Rock _____ % Small Rock _____ % Bare/Fines _____

Slope exposure (circle one and/or enter actual °): NE X SE _____ SW _____ NW X Flat _____ Variable _____

Slope steepness (circle one and enter actual °): 0° _____ 1-5° _____ 5-25° _____ > 25° X Upland or Wetland/Riparian (circle one)

Site history, stand age, and comments: _____

Type / level of disturbance (use codes): _____

VEGETATION DESCRIPTION

Field-assessed vegetation alliance name: Diogen coastal sage scrub

Field-assessed association name (optional): _____

Size of stand: <1 acre _____ 1-5 acres X >5 acres _____ Adjacent alliances: _____

Tree: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

If Tree, list 1-3 dominant overstory spp.: _____

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) Desert Palm/Joshua Tree: 1 (<1.5" base diameter), 2 (1.5-6" diam.), 3 (>6" diam.)

Desert Riparian Tree/Shrub: 1 (<2ft. stem ht.), 2 (2-10ft. ht.), 3 (10-20ft. ht.), 4 (>20ft. ht.)

% Overstory Conifer/Hardwood Tree cover: _____ / _____ Shrub cover: 100 Herbaceous cover: 25 Total Veg cover: _____

Modal Conifer/Hardwood height: _____ / _____ Tall Shrub/Low Shrub height: 4m / 1m Herbaceous height: _____

Species (List up to 12 major species), Stratum, and Approximate % cover: (Jepson Manual nomenclature please)

Strata categories: T=tall, M=medium, L=low: % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Strata	Species	% cover	Strata	Species	% cover
T	<i>Rhus integrifolia</i>	25-50	M	<i>Encelia californica</i>	5-15
M	<i>Artemisia californica</i>	25-50			
M	<i>Monkey flower</i>	5-15			
T	<i>Heteromeles heteromeles</i>	1-5			
T	<i>Malosma laurina</i>	1-5			
M	<i>Salvia mellifera</i>	15-25			

Major non-native species (with % cover): Tree tobacco <1%

Unusual species: _____

PROBLEMS WITH INTERPRETATION

Confidence in identification: (L, M, H) L/H Explain _____

Other identification problems (describe): _____

Polygon is more than one type: (Yes/No) No (Note: type with greatest coverage in polygon should be entered in above section)

Other types: _____

Has the vegetation changed since air photo taken? (Yes, No) _____ If Yes, how? What has changed (write N/A if so)? _____

CALIFORNIA NATIVE PLANT SOCIETY - VEGETATION RAPID ASSESSMENT FIELD FORM

(Revised February 5, 2003)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association
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LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: 6	Air photo #: 1	Date:	Name(s) of surveyors:
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GPS waypoint #: _____ GPS name: _____ GPS datum: (NAD 27) _____ Is GPS within stand? Yes / No

If No cite distance (note ft/m), bearing and view from point to stand center: _____ Error: \pm _____ ft/m

UTM field reading: UTME _____ UTMN _____ UTM zone: _____

Elevation: _____ ft/m Photograph #'s: _____

Topography: flat _____ concave _____ convex _____ undulating X | bottom X lower X mid X upper X top X

Geology: _____ Soil Texture: _____ % Large Rock _____ % Small Rock _____ % Bare/Fines _____

Slope exposure (circle one and/or enter actual $^{\circ}$): NE _____ SE _____ SW _____ NW X Flat _____ Variable _____

Slope steepness (circle one and enter actual $^{\circ}$): 0 $^{\circ}$ _____ 1-5 $^{\circ}$ _____ 5-25 $^{\circ}$ X > 25 $^{\circ}$ _____ Upland or Wetland/Riparian (circle one)

Site history, stand age, and comments: High quality habitat, probably 50+ yrs old

Type / level of disturbance (use codes): _____

VEGETATION DESCRIPTION

Field-assessed vegetation alliance name: Diegan coastal sage scrub

Field-assessed association name (optional): _____

Size of stand: <1 acre _____ 1-5 acres X >5 acres _____ Adjacent alliances: _____

Tree: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

If Tree, list 1-3 dominant overstory spp.: _____

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) Desert Palm/Joshua Tree: 1 (<1.5" base diameter), 2 (1.5-6" diam.), 3 (>6" diam.)

Desert Riparian Tree/Shrub: 1 (<2ft. stem ht.), 2 (2-10ft. ht.), 3 (10-20ft. ht.), 4 (>20ft. ht.)

% Overstory Conifer/Hardwood Tree cover: _____ Shrub cover: 75 Herbaceous cover: 50 Total Veg cover: 100

Modal Conifer/Hardwood height: _____ Tall Shrub/Low Shrub height: 3m / 1m Herbaceous height: 1.5m

Species (List up to 12 major species), Stratum, and Approximate % cover: (Jepson Manual nomenclature please)

Strata categories: T=tall, M=medium, L=low; % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Strata	Species	% cover	Strata	Species	% cover
M	Artemisia californica	25-50			
M	Encelia californica	15-25			
T	Rhus integrifolia	15-25			
L	Hemizonia stricta fasciculatum	1-5			
L	Nassella pulchra	1-5			

Major non-native species (with % cover): Brassica nigra

Unusual species: Orcutt's hazardia Hazardia orcutti - planted by CNLM

PROBLEMS WITH INTERPRETATION

Confidence in identification: (L, M, H) H Explain _____

Other identification problems (describe): _____

Polygon is more than one type: (Yes, No) _____ (Note: type with greatest coverage in polygon should be entered in above section)

Other types: _____

Has the vegetation changed since air photo taken? (Yes, No) _____ If Yes, how? What has changed (write N/A if so)? _____

CALIFORNIA NATIVE PLANT SOCIETY - VEGETATION RAPID ASSESSMENT FIELD FORM

(Revised February 5, 2003)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association
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LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo #:	Date:	Name(s) of surveyors:
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GPS waypoint #: _____ GPS name: _____ GPS datum: (NAD 27) _____ Is GPS within stand? Yes / No

If No cite distance (note ft/m), bearing and view from point to stand center: _____ Error: \pm _____ ft/m

UTM field reading: UTM E _____ UTM N _____ UTM zone: _____

Elevation: _____ ft/m Photograph #'s: _____

Topography: flat ☒ concave _____ convex _____ undulating _____ | bottom _____ lower _____ mid _____ upper _____ top _____

Geology: _____ Soil Texture: _____ % Large Rock _____ % Small Rock _____ % Bare/Fines _____

Slope exposure (circle one and/or enter actual $^{\circ}$): NE _____ SE _____ SW _____ NW _____ Flat _____ Variable ☒

Slope steepness (circle one and enter actual $^{\circ}$): 0° ☒ $1-5^{\circ}$ _____ $5-25^{\circ}$ _____ $>25^{\circ}$ _____ Upland or Wetland/Riparian (circle one)

Site history, stand age, and comments: _____

Type / level of disturbance (use codes): _____

VEGETATION DESCRIPTION

Field-assessed vegetation alliance name: mule-fat scrub

Field-assessed association name (optional): _____

Size of stand: <1 acre ☒ $1-5$ acres _____ >5 acres _____ Adjacent alliances: _____

Tree: T1 ($<1"$ dbh), T2 (1.6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 ($>24"$ dbh), T6 multi-layered (T3 or T4 layer under T5, $>60\%$ cover)

If Tree, list 1-3 dominant overstory spp.: Salix spp

Shrub: S1 seedling (<3 yr. old), S2 young ($<1\%$ dead), S3 mature (1-25% dead), S4 decadent ($>25\%$ dead)

Herbaceous: H1 ($<12"$ plant ht.), H2 ($>12"$ ht.) Desert Palm/Joshua Tree: 1 ($<1.5"$ base diameter), 2 (1.5-6" diam.), 3 ($>6"$ diam.)

Desert Riparian Tree/Shrub: 1 (<2 ft. stem ht.), 2 (2-10 ft. ht.), 3 (10-20 ft. ht.), 4 (>20 ft. ht.)

% Overstory Conifer/Hardwood Tree cover: _____ / _____ Shrub cover: 25 Herbaceous cover: 75 Total Veg cover: 75

Modal Conifer/Hardwood height: _____ / _____ Tall Shrub/Low Shrub height: 3m / 1m Herbaceous height: 0.5m

Species (List up to 12 major species), Stratum, and Approximate % cover: (Jepson Manual nomenclature please)

Strata categories: T=tall, M=medium, L=low; % cover intervals for reference: $<1\%$, 1-5%, $>5-15\%$, $>15-25\%$, $>25-50\%$, $>50-75\%$, $>75\%$

Strata	Species	% cover	Strata	Species	% cover
M	Baccharis salicifolia	15-25			
T	Salix spp	5-15			

Major non-native species (with % cover): _____

Unusual species: _____

PROBLEMS WITH INTERPRETATION

Confidence in identification: (L, M, H) H Explain _____

Other identification problems (describe): _____

Polygon is more than one type: (Yes, No) No (Note: type with greatest coverage in polygon should be entered in above section)

Other types: _____

Has the vegetation changed since air photo taken? (Yes, No) _____ If Yes, how? What has changed (write N/A if so)? _____

CALIFORNIA NATIVE PLANT SOCIETY - VEGETATION RAPID ASSESSMENT FIELD FORM

(Revised February 5, 2003)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association
LOCATIONAL/ENVIRONMENTAL DESCRIPTION			
Polygon/Stand #: <u>8</u>	Air photo #: <u>1</u>	Date: _____	Name(s) of surveyors: _____
GPS waypoint #: _____		GPS name: _____	GPS datum: (NAD 27) _____ Is GPS within stand? <u>Yes</u> / No
If No cite distance (note ft/m), bearing and view from point to stand center: _____ Error: \pm _____ ft/m			
UTM field reading: UTME _____		UTMN _____	UTM zone: _____
Elevation: _____ ft/m Photograph #'s: _____			
Topography: flat _____ concave _____ convex _____ undulating <u>X</u> bottom _____ lower _____ mid _____ upper _____ top _____			
Geology: _____ Soil Texture: _____ % Large Rock _____ % Small Rock _____ % Bare/Fines _____			
Slope exposure (circle one and/or enter actual $^{\circ}$): NE _____ SE _____ SW _____ NW _____ Flat _____ Variable <u>X</u>			
Slope steepness (circle one and enter actual $^{\circ}$): 0 $^{\circ}$ _____ 1-5 $^{\circ}$ _____ 5-25 $^{\circ}$ _____ >25 $^{\circ}$ _____ Upland or Wetland/Riparian (circle one)			
Site history, stand age, and comments: <u>Site disturbed by utility roads, non-native species</u> <u>Area being enhanced</u>			
Type / level of disturbance (use codes): _____			
VEGETATION DESCRIPTION			
Field-assessed vegetation alliance name: <u>Diegan coastal sage scrub</u>			
Field-assessed association name (optional): _____			
Size of stand: <1 acre _____ 1-5 acres <u>X</u> >5 acres _____ Adjacent alliances: _____			
Tree: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)			
If Tree, list 1-3 dominant overstory spp.: _____			
Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)			
Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) Desert Palm/Joshua Tree: 1 (<1.5" base diameter), 2 (1.5-6" diam.), 3 (>6" diam.)			
Desert Riparian Tree/Shrub: 1 (<2ft. stem ht.), 2 (2-10ft. ht.), 3 (10-20ft. ht.), 4 (>20ft. ht.)			
% Overstory Conifer/Hardwood Tree cover: _____ / _____ Shrub cover: <u>20</u> Herbaceous cover: <u>75</u> Total Veg cover: <u>95</u>			
Modal Conifer/Hardwood height: _____ / _____ Tall Shrub/Low Shrub height: _____ / _____ Herbaceous height: _____			
Species (List up to 12 major species), Stratum, and Approximate % cover: (Jepson Manual nomenclature please)			
Strata categories: T=tall, M=medium, L=low: % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%			
Strata	Species	% cover	Strata
M	<i>Artemisia californica</i>	15-25	
T	<i>Rhus integrifolia</i>	1-5	
M	<i>Eriogonum fasciculatum</i>	5-15	
Major non-native species (with % cover): <u>Brassica nigra 25%</u>			
Unusual species: _____			
PROBLEMS WITH INTERPRETATION			
Confidence in identification: (L, M, H) <u>H</u> Explain _____			
Other identification problems (describe): _____			
Polygon is more than one type: (Yes, <u>No</u>) _____ (Note: type with greatest coverage in polygon should be entered in above section)			
Other types: _____			
Has the vegetation changed since air photo taken? (Yes, <u>No</u>) _____ If Yes, how? What has changed (write N/A if so)? _____			

CALIFORNIA NATIVE PLANT SOCIETY - VEGETATION RAPID ASSESSMENT FIELD FORM

(Revised February 5, 2003)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association
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LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #: 9	Air photo #: 1	Date:	Name(s) of surveyors:
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GPS waypoint #: _____ GPS name: _____ GPS datum: (NAD 27) _____ Is GPS within stand? Yes / No

If No cite distance (note ft/m), bearing and view from point to stand center: _____ Error: ± _____ ft/m

UTM field reading: UTM E _____ UTM N _____ UTM zone: _____

Elevation: _____ ft/m Photograph #'s: _____

Topography: flat _____ concave _____ convex _____ undulating ☒ bottom _____ lower _____ mid _____ upper _____ top _____

Geology: _____ Soil Texture: _____ % Large Rock _____ % Small Rock _____ % Bare/Fines _____

Slope exposure (circle one and/or enter actual °): NE _____ SE ☒ SW ☒ NW _____ Flat _____ Variable _____

Slope steepness (circle one and enter actual °): 0° _____ 1-5° _____ 5-25° ☒ > 25° _____ Upland or Wetland/Riparian (circle one)

Site history, stand age, and comments: Revegetated slopes as part of development, mostly bare ground at this time

Type / level of disturbance (use codes): _____

VEGETATION DESCRIPTION

Field-assessed vegetation alliance name: Restored Diogen Coastal Sage scrub

Field-assessed association name (optional): _____

Size of stand: <1 acre _____ 1-5 acres ☒ >5 acres _____ Adjacent alliances: _____

Tree: T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

If Tree, list 1-3 dominant overstory spp.: _____

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) Desert Palm/Joshua Tree: 1 (<1.5" base diameter), 2 (1.5-6" diam.), 3 (>6" diam.)

Desert Riparian Tree/Shrub: 1 (<2ft. stem ht.), 2 (2-10ft. ht.), 3 (10-20ft. ht.), 4 (>20ft. ht.)

% Overstory Conifer/Hardwood Tree cover: _____ / _____ Shrub cover: _____ Herbaceous cover: _____ Total Veg cover: _____

Modal Conifer/Hardwood height: _____ / _____ Tall Shrub/Low Shrub height: _____ / _____ Herbaceous height: _____

Species (List up to 12 major species), Stratum, and Approximate % cover: (Jepson Manual nomenclature please)

Strata categories: T=tall, M=medium, L=low; % cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Strata	Species	% cover	Strata	Species	% cover

Major non-native species (with % cover): _____

Unusual species: _____

PROBLEMS WITH INTERPRETATION

Confidence in identification: (L, M, H) _____ Explain _____

Other identification problems (describe): _____

Polygon is more than one type: (Yes, No) _____ (Note: type with greatest coverage in polygon should be entered in above section)

Other types: _____

Has the vegetation changed since air photo taken? (Yes, No) _____ If Yes, how? What has changed (write N/A if so)? _____